

CLAIMS

Claim 1 (Currently amended): An assembly formed on a building site for producing a vertically disposed poured-in-place wall structure having horizontally disposed reinforcement rods, said assembly comprising:

- a) wall molding means for forming laterally spaced, opposed molding surfaces that define a wall mold cavity for forming said wall structure,
- b) said wall molding means including means for vertically and freely disposing laterally spaced wall forming panels to provide said molding surfaces along opposed sides of said wall mold cavity,
- c) said cavity having an upwardly directed top opening into which hardenable material is to be poured and hardened to produce said wall structure within said wall mold cavity,
- d) a plurality of separable, laterally spaced grid means suspended to project outwardly from and along the vertically disposed molding surfaces in said mold cavity, each said grid means extending between said molding surfaces and including laterally spaced elongate grid elements that extend vertically and are fixedly attached to a plurality of transverse tie members each of which members is disposed at a vertically spaced location along said grid elements,
- e) each said transverse tie member being effective to freely and contiguously support and suspend for contiguously supporting said reinforcement rods which extend substantially parallel to said molding surfaces and are freely contiguously disposed on said ~~grid means~~ transverse tie members at a plurality of vertically spaced locations within said mold cavity, and
- f) means for attaching said grid means to said opposed wall forming panels to retain said reinforcement rods in place at said plurality of vertically spaced locations while said hardenable material is being poured into said mold cavity and allowed to harden.

Claim 2 (Cancelled).

Claim 3 (Previously presented): An assembly as defined in claim 1 wherein

each said grid means has a sufficient amount of rigidity to project outwardly from a vertically disposed molding surface and to horizontally suspend the reinforcement rods when said grid means is attached to said vertically disposed molding surface.

Claim 4 (Previously presented): An assembly as defined in claim 1 wherein said wall forming panels are portable for removable vertical disposition to form said wall mold cavity, and

said means for vertically disposing said wall forming panels is effective to maintain said wall forming panels independently with respect to each other in said vertical disposition.

Claim 5 (Currently amended): An assembly as defined in claim 1 wherein said plurality of grid means includes laterally spaced, separable grid members that extend upwardly along and between the opposed molding surfaces,

each grid member includes said elongate grid elements and said plurality of tie members which are horizontally disposed at said spaced preselected vertical locations, ~~is laterally spaced horizontally with respect to each other along said opposed molding surfaces,~~

said reinforcement rods are horizontally freely disposed contiguously on and transversely across said plurality of ~~grid means~~ tie members, and

said reinforcement rods are laterally spaced with respect to each other between said molding surfaces.

Claim 6 (Currently amended): An assembly formed on a building site for producing a vertically disposed poured-in-place wall structure having horizontal reinforcement rods, said assembly comprising:

a) wall molding means for forming laterally spaced, opposed molding surfaces that define a wall mold cavity for forming said wall structure,

b) said wall molding means including means for vertically and freely disposing laterally spaced wall forming panels to provide said molding surfaces along opposed sides of said wall mold

cavity,

c) said cavity having an upwardly directed top opening into which hardenable material is to be poured and hardened to produce said wall structure within said wall mold cavity,

d) a plurality of separable, laterally spaced grid means suspended to project outwardly from and along the vertically disposed molding surfaces in said mold cavity, each said grid means extending between said molding surfaces for freely positioning and retaining freely contiguously disposed, horizontally extending reinforcement rods substantially parallel to said molding surfaces at a preselected horizontal location spaced inwardly from each said opposed molding surface within said mold cavity, and

e) each said grid means including a plurality of tie members that are each disposed at vertically spaced preselected vertical locations, and means for attaching each said grid means to said opposed wall forming panels for locating said horizontally disposed reinforcement rods at said vertically spaced preselected vertical locations between said spaced molding surfaces,

f) said grid means being effective to retain said reinforcement rods in place at said preselected horizontal and vertical locations while said hardenable material is being poured into and allowed to harden within said mold cavity,

g) said grid means including a plurality of elongate grid elements that extend vertically along the vertically disposed molding surfaces and between the opposed molding surfaces,

h) each elongate grid element being fixedly attached to a said plurality of tie members that are substantially perpendicular to the molding surfaces and horizontally disposed at said spaced preselected vertical locations for contiguously supporting said freely contiguously disposed, horizontal reinforcement rods, and

i) said grid elements including rod locating means for maintaining said reinforcement rods at said preselected horizontal locations spaced inwardly from each said opposed molding surface while hardenable material is being poured into said mold cavity.

Claim 7 (Previously presented): An assembly as defined in claim 6 wherein

said rod locating means includes a pair of elongated substantially parallel, vertically disposed elongate elements fixedly extending across said plurality of vertically spaced tie members at each horizontal location between said molding surfaces to freely retain a reinforcement rod that extends horizontally across and normal to the plurality of vertically disposed elongate grid elements.

Claim 8 (cancelled).

Claim 9 (withdrawn) (Previously presented amended): A grid device for horizontally disposing reinforcement rods in a poured-in-place wall mold cavity formed on a building site and defined by opposed molding surfaces of opposed vertically disposed wall molding panels, said grid device comprising:

- a) a plurality of elongate elements and a plurality of tie members fixedly connected substantially perpendicular to and laterally spaced with respect to each other along said elongate elements for freely positioning said reinforcement rods within said mold cavity at a preselected horizontal location between each said opposed molding surface and at ~~spaced~~ preselected vertical locations spaced along said molding surfaces,
- b) said grid device is sufficiently rigid to project outwardly from a vertically disposed molding surface and to horizontally suspend the reinforcement rods when said grid device is attached to said vertically disposed molding surface, and
- c) means for removably attaching said grid device to said wall forming panels for extending vertically along and substantially parallel to the vertically disposed molding surfaces to retain said reinforcement rods in place between said wall forming panels at said preselected horizontal and vertical locations while hardenable material is being poured into said wall mold cavity and allowed to harden.

Claim 10 (withdrawn) (Currently amended): A grid device as defined in claim 9 wherein

said preselected horizontal location is spaced inwardly from each said molding surface, ~~and said grid device is removably attached to said wall molding panels.~~

Claims 11-13 (cancelled)

Claim 14 (withdrawn) (Currently amended): A grid device as defined in claim 9 wherein said grid device includes rod locating means for maintaining said reinforcement rods at a plurality of said preselected horizontal ~~vertical~~ locations ~~and~~ horizontally spaced inwardly from each said opposed molding surface while hardenable material is being poured into said mold cavity.

Claim 15 (withdrawn) (Previously presented amended): A grid device as defined in claim 14 wherein

said rod locating means includes a pair of parallel elongate elements fixedly extending across said plurality of vertically spaced tie members at each horizontal location between said molding surfaces to freely retain a horizontally disposed reinforcement rod.

Claim 16 (withdrawn) (Previously presented amended): A grid device as defined in claim 14 wherein

said means for attaching said grid device to said wall forming panels includes a loop at each end of an upper said tie member and at each end of a lower said tie member,

each said upper and lower tie members having loop end portions which are formed back upon itself to define said loops, and

each opposed molding surface includes means for receiving said loop end portions of said upper and lower tie members for removably attaching the grid device to said wall panels.

Claim 17 (Previously presented amended): An assembly as defined in claim 48 wherein at least two reinforcement rods are each freely positioned horizontally at a spaced inward distance from the opposed molding surfaces and at a spaced outward distance from a centerline located between said opposed molding surfaces.

Claims 18-27 (withdrawn)

Claim 28 (withdrawn) (Currently amended): A method for producing on a building site a vertically disposed poured-in-place wall structure having horizontally disposed reinforcement rods, said method comprising the steps of:

- a) providing wall molding means including panel holding means for forming laterally spaced, opposed molding surfaces that define a wall mold cavity for forming said wall structure,
- b) said wall mold cavity having an upwardly directed top opening into which hardenable material is to be poured and hardened to produce said wall structure within said wall mold cavity,
- c) vertically disposing first wall forming means to provide a first molding surface along one side of said wall mold cavity,
- d) providing a plurality of separable grid means having two edges for extending vertically along the vertically disposed molding surfaces and being sufficiently rigid for freely positioning and retaining said reinforcement rods horizontally along said first molding surface at a preselected horizontal location laterally spaced from said first molding surface and at preselected vertical locations spaced along said first molding surface within said mold cavity, then
- e) attaching a first edge of said plurality of separable grid means to said wall forming means to project outwardly from said first molding surface, then
- f) freely positioning said reinforcement rods to horizontally contiguously rest on said grid means at a spaced distance from said first molding surface and at said preselected vertical locations spaced along said first molding surface, then
- g) vertically disposing second wall forming means opposed to the first wall forming means to provide a second molding surface opposed to said first molding surface, and
- h) attaching the other outwardly projecting edge of said plurality of grid means to the second wall forming means for retaining said reinforcement rods in place at said preselected horizontal and vertical locations while hardenable material is being poured into said mold cavity and is allowed to harden.

Claim 29 (withdrawn) (Previously presented amended): A method as defined in claim 28 wherein

said first wall forming means includes a plurality of wall forming panels to provide said first molding surface, and

said second wall forming means includes a plurality of wall forming panels to provide said second molding surface.

Claim 30 (cancelled).

Claim 31 (withdrawn) (Currently amended): A method as defined in claim 28 wherein said plurality of grid means each includes a plurality of vertically disposed retaining means for said reinforcement rods spaced horizontally with respect to each other along said opposed spaced molding surfaces,

said reinforcement rods are horizontally disposed across said plurality of grid means, and ~~said reinforcement rods~~ are substantially parallel to the molding surfaces and laterally spaced with respect to each other between said molding surfaces.

Claim 32 (withdrawn) (Previously presented amended): A method as defined in claim 28 wherein

said wall forming panels are portable for removable vertical disposition to form said wall mold cavity, and

said panel holding means is effective to independently maintain said wall forming panels with respect to each other in said vertical disposition.

Claim 33 (withdrawn) (Previously presented amended): A method as defined in claim 28 wherein

said grid means includes a plurality of elongate grid elements that each extend vertically along the vertically disposed molding surfaces and between the opposed molding surfaces, and a plurality of grid tie members horizontally disposed and fixedly attached to said elongate grid

elements at spaced preselected vertical locations,

said grid means includes rod locating means for maintaining said reinforcement rods at said vertical locations and spaced inwardly from each said opposed molding surface while hardenable material is being poured into said mold cavity.

Claim 34 (withdrawn) (Previously presented amended): A method as defined in claim 33 wherein

said rod locating means includes a pair of parallel elongate grid members fixedly extending across said plurality of vertically spaced grid tie members at each horizontal location between said molding surfaces to freely retain a reinforcement rod that extends horizontally across the plurality of vertically disposed grid means.

Claim 35 (withdrawn) (Previously presented amended): A method as defined in claim 28 wherein

said reinforcement rods include at least two elongate rods each freely positioned horizontally at a spaced inward distance from the opposed molding surfaces and at a spaced outward distance from a centerline located between said opposed molding surfaces.

Claims 36-47 (withdrawn)

Claim 48 (Currently amended): In an assembly formed on a building site including a poured-in-place wall mold cavity defined by opposed molding surfaces on vertically disposed, opposed wall molding panels having an upwardly directed top opening into which hardenable material is to be poured and hardened to produce a wall structure with horizontally disposed reinforcement rods, an assembly the combination comprising:

a) a plurality of separable, horizontally laterally spaced grid means suspended to project outwardly from and along said opposed molding surfaces within said mold cavity, each said grid means including a plurality of tie members that are disposed at vertically spaced preselected vertical locations for contiguously supporting said horizontally extending reinforcement rods ~~so as to be~~

being freely contiguously disposed on said tie members ~~grid means~~,

b) said grid means being effective to retain the freely contiguously disposed reinforcement rods substantially parallel to said molding surfaces at a plurality of horizontal locations vertically spaced along and between said opposed wall surfaces, and

c) means for removably attaching said grid means to said opposed wall molding panels at laterally spaced horizontal distances with respect to each other to retain said reinforcement rods in place while hardenable material is being poured into said wall mold cavity and allowed to harden.

Claim 49 (Currently amended): ~~An assembly~~ The combination as defined in claim 48 wherein

each said grid means includes a plurality of elongate elements for extending vertically in a direction substantially parallel to the molding surfaces ~~and a~~ with said plurality of horizontal tie members being fixedly connected to and substantially perpendicular to said elongate elements,

said horizontal tie members being vertically spaced with respect to each other to provide contiguous support for said reinforcement rods at said vertically spaced horizontal locations,

said reinforcement rods freely contiguously resting on said horizontal tie members at laterally spaced distances inwardly from each said opposed molding surface.

Claim 50 (Currently amended): ~~An assembly~~ The combination as defined in claim 48 wherein

each said grid means having a plurality of elongate elements for extending vertically along ~~the~~ said vertically disposed molding ~~surfaces~~ panels,

each grid means having a plurality of tie members fixedly connected to the vertically disposed elongate elements ~~for~~ and extending substantially perpendicular to the molding surfaces to define said vertically spaced horizontal locations,

said tie members being effective to contiguously, freely support the horizontally disposed reinforcement rods at a preselected horizontal location spaced inwardly from each said molding

surface within said mold cavity.

Claim 51 (new) The combination as defined in claim 48 wherein

said grid means includes rod locating means for maintaining said reinforcement rods at said plurality of horizontal locations spaced inwardly from each said opposed molding surface while hardenable material is being poured into said mold cavity,

said rod locating means includes two pair of elongated substantially parallel, vertically disposed elongate grid elements fixedly extending across said plurality of vertically spaced tie members at each horizontal location between said molding surfaces,

each said pair of elongate grid elements being spaced by an amount effective to freely retain a reinforcement rod that extends horizontally across and normal to each pair of said elongate grid elements, each said pair being spaced inwardly from the opposed molding surfaces and spaced outwardly from a centerline located between said opposed molding surfaces.

Claim 52 (new) The combination as defined in claim 48 wherein

said means for attaching each said grid means to said wall forming panels includes a loop at each end of an upper said tie member and at each end of a lower said tie member,

each said upper and lower tie members having loop end portions which are formed back upon itself to define said loops, and

each opposed molding surface includes means for receiving said loop end portions of said upper and lower tie members for removably attaching each grid means to said wall panels.

Claim 53 (new): An assembly as defined in claim 1 wherein

said wall molding means is removably mounted to said assembly, and

each said grid means is removably suspended along the vertically disposed molding surfaces.

Claim 54 (new) An assembly as defined in claim 1 wherein

each said grid means includes an upper said tie member and a lower said tie member each having a length longer than respective lengths of a plurality of tie members laterally spaced along

said elongate grid elements between said upper and lower tie members,

said length of said upper and lower tie members being longer by an amount sufficient to form distal end coupling portions at each distal end of said upper and lower tie members for extending into said wall forming panels,

each said opposed wall forming panel includes means for receiving said distal end portions of said upper and lower tie members,

said means for attaching said grid means to said wall forming panels includes means for removably connecting each distal end coupling portion received by said wall panel means for removably attaching each grid means to said wall panels.